Man, fever weight loss, productive cough and severe hemoptisy
Case N°1

CXR: cavity in the left apex, associated with alveolar picture in the inferior part of the left upper lobe (lingula). AFB positive in sputum: TB cavity and tb pneumonia
Case N°1

Scan view of the previous case
Man, 23 years old, cough, fever and hemoptysis
CXR: retroclavicular cavity, associated with infiltrate and axillary nodules: typical aspect of TB, with association of lesions with different seniority (nodules, infiltrate, cavities..). This association is very typical of TB AFB positive in sputum.
Man, 22 years old, cough, hemoptoïc sputum
CXR: cavity in the upper left lobe (red arrow) associated with homolateral and controlateral nodules (yellow arrows). The association of lesions of different seniority, is highly indicative of TB. AFB positive in sputum: TB cavity of the left upper lobe.
Case N°3

Previous case, scan view
Man, worsening condition, cough and hemoptysis
CXR: 2 visible cavities in the left upper lobe, with drainage bronchus of the inferior cavity. Association with alveolar picture of the inferior part of the upper lobe (lingula segment) and contralateral infiltrate. AFB positive in sputum: **TB**. This picture is very typical of Tuberculosis.

In this situation, if AFB is negative one must evoke 3 situations:

- Patient too weak to produce efficient sputum (salivar sputum)
- Error in laboratory technique
- The TB treatment has beginning before sputum examination (with such bulky lesions, several weeks of treatment are necessary for negative sputum)
Scan view previous case: notice the association of cavities, alveolar pictures, and nodules: the association of lesions of different seniority is very indicative of TB
Case N°3

Evolution after tb treatment
Evolution after tb treatment
Man, 45 years old, fever, cough and hemoptysis
CXR: infiltrate of the upper right lobe with probable excavation. The situation and the aspect of the lesions are very suggestive of TB AFB positive in sputum.
Man, african soldier cough and fever for few weeks.
Case N°5

CXR: cavited pneumonia of the superior lobe. Associated pneumonia of the middle lobe. AFB positive in sputum: cavited tuberculous pneumonia
Scan view of the previous case
Man, 20 years old, coming from Guyana. Fever 40° C, right thoracic pain. No improvement with antibiotic.
CXR: cavited opacity of the right inferior lobe. Think to amoebic abscess. Improvement with metronidazole. Usually, lung amoebic abscess is associated with hepatic abscess.
Man, 50 years old. Fever right thoracic pain and abundant purulent sputum
AFB negative
Case N°7

Chest X ray: round bulky excavated picture: **Bacterial non tb abscess**. Notice the same dimension of the fluid level on the front and the lateral view: the opacity is in the lung and grows like a sphere. So the dimension of the section materialised by the fluid level has the same dimension on the front view and the lateral view.
Scan view of the previous case
Fever, cough and dyspnea with left thoracic paint.
Case N°8

Chest xray: complex opacity of the left lung with fluid level. Encysted pleurisy or pulmonary abcess?
Lateral view gives the answer: the dimension of the fluid level is not the same on the front view and the lateral view (different from previous case N°7). The fluid level is in the pleural cavity: 

**encysted purulent pleurisy with pyopneumothorax.**

Pleural drainage is necessary for recovery.
Case N°8
Fever, cough and exercise dyspnea. Worsening condition
Case N°9

CXR: - Atelectasis of the right superior lobe: retracted and systematised opacity with ascending position of the small fissura. This atelectasis is associated with a cavitation.

- Nodules and infiltrate in the right inferior lobe and in the middle of the left lung. The association of atelectasis, cavitation and nodules (lesions of different seniority) strongly suggests Tuberculosis.

In this case, AFB is positive in sputum, because of the bulky excavation in the right superior lobe.
Man, cough, fever and worsening condition for 3 months, recent abundant hemoptisy.
CXR: Systematised pneumonia of the right superior lobe with 2 cavities inside. Notice the drainage bronchus of the superior cavity (red arrow). Most probable diagnosis is active TB. AFB positive in sputum. Notice the right hilar enlargement suggesting adenopathy.
Fever, cough and hemoptoïc sputum for few weeks. Weight loss

courtesy of Dr Van Den Homberg, Tanzania
1° Opacity of the right superior lobe. This opacity is alveolar: non homogenous, not well limited and systematised: the inferior edge is limited by the small fissura(yellow arrows). This opacity is also cavited.

2° on the left side, alveolar picture or infiltrate in the retroclavicular area. The bilateralility and the aspect of the lesions are indicative of TB. AFB in sputum should be positive and confirm the diagnosis because of the excavation in which bacilli are very numerous and in communication with airways.
Case N°12

AFB negative in sputum
Notice the retractile cavity in the right lung, which is surrounded by an aeric cystis. Middle lobe atelectasis These pictures look like **TB sequella**. In the retractile cavity there is a round dense opacity which strongly suggests **aspergilloma** which has developed in a old sterilised TB cavity (yellow arrow)
Fever cough and severe hemoptisy

Case N°13

Courtesy Dr Van Den Homberg Tanzania
1° Cavity in the right superior lobe
2° It is associated with nodular and alveolar pictures in the inferior lobe and on the left side. Bacterial pneumonia is possible but the most probable diagnosis is TB pneumonia, because of bilaterality, with lesions of different seniority.

In case of TB The diagnosis will be confirmed by AFB in sputum, because with such a big cavity, the bacilli are very numerous and must be found in sputum.
Dyspnea and chronic cough. Worsening condition with weight loss.
Nodular and alveolar pictures on the right side (inferior lobe). Alveolar and bulky cavity on the left side. The association of these different lesions with different seniority is highly indicative of Tuberculosis.
Abundant and repeated hemoptysis. Past history of TB 10 years ago, with nine months treatment. No AFB in sputum.
CXR: right retro-clavicular opacity, with small cavity on the top looking like moon crescent: this strongly suggests **aspergilloma** developing in old tb sequella cavity.
Enlarged view of the previous case
Man, long past history of bronchial repeated infections, morning chronic abundant expectoration, and exercise dyspnea.
Chest X-ray: several round cavities, with fine or thicker limits in the inferior lobe. Repeated AFB in sputum are negative. Typical aspect of bronchiectasis.
Case N°17

Man, heavy smoker. Dyspnea and hemoptysis, worsening condition and weight loss. AFB negative in sputum.
Chest X ray: round bulky mass with fluid level inside.
TB is improbable: very big mass with small excavation. Isolated lesion with no associated infiltrate. Excavation without AFB in sputum. Bacterial abscess: possible but the clinical context is not suggestive: no fever, no purulent sputum. Bronchial cancer is the most probable diagnosis.
Evolution of the previous case. Central necrosis in the bulky neoplastic mass, concomitant with hemoptisy. Cavited bronchial cancer.
55 years old male. Purulent sputum, fever and worsening condition since 2 weeks. Diabetic and smoker patient. AFB negative.
Case N°18

Chest X ray: Alveolar opacity of the right lung with a big cavity inside. No peripheral nodules, no AFB in sputum, acute evolution: the diagnosis of TB is improbable. The most probable diagnosis is **bacterial lung abscess**. The causal bacterium could be staphylococcus, (frequency in diabetic patient), anaerobic, or gram negative bacterium.
Woman, 60 years old, past history of TB more than 10 years ago.
Chronic cough with abundant sputum. Repeated AFB negative.
No improvement with TB retreatment.
Case N°19

Chest X ray: Retraction of the right hemi-thorax with many round cavities with fluid fluid levels: Typical pictures of diffused bronchectasis, sequellae of TB
Man, 59 years old, hemoptisy with AFB negative in sputum. Good health condition. Past history of pulmonary tuberculosis, with a nine months treatment 4 years ago.
Same patient 2 years later (2006): possible « nodule » in the late retroclavicular area (always compar right and left for analysis of the retroclavicular area.). New isolated hemoptisy. AFB negative.
Case N°20

Same patient, June 2009: very severe hemoptysis, life threatening situation. Improvement with IV glypressine treatment before emergency thoracic surgery (left superior lobectomy.) Notice on the chest X-ray before surgery the enlargement of the retroclavicular opacity, inside the TB sequella cavity. Clinical and radiological evolution is highly suggesting of **aspergilloma**.
Same patient: Typical aspect of aspergilloma on scannographic view
Man, 34 years old, repeated bronchial infections with purulent sputum. Repeated AFB negative. Notion of severe lung disease in childhood.
Case N°21

Chest X ray: Alveolar opacities in the inferior lobe with round not well limited cavities. Clinical context with such radiological aspect suggests **Bronchiectasis** (TB sequellae, or measles, or wooping cough sequellae).
Scannographic view of the previous case
Woman, 55 years old, heavy smoker (more than 1 pqt/ day since 20 years old). Hemoptoïc sputums. Repeted AFB negative.
Chest X ray: round cavified picture in the left upper lobe. It could be Tuberculous cavity but, AFB are negative in sputum, which is rather unusual in case of TB cavity, and the opacity is alone without others tb nodules around the cavity. Radiological features and tobacco context must evocate bronchial cancer with cavity.
Scannographic view: excavated opacity, not well limited.
Thoracic surgery: superior lobectomy: *bronchial cancer*
Man, 55 years old past history of alcohol and tobacco. Worsening condition with repeated hemoptysis. AFB negative in sputum and bronchial aspiration.
CXR: excavated opacity of the right superior lobe. Different diagnosis could be considered:

- TB cavity, but AFB are negative in sputum and in bronchial aspiration, which is rather unusual in case of big cavities like this one.
- bronchial abcess, but external limit are sharp, which rather suggests bronchial cancer, and no infectious context and no purulent sputum. Nevertheless not impossible but no improvement with antibiotic.
- **Bronchial cancer**: It was the good diagnosis (epidermoïd type). This patient has been deferred to thoracic surgery unit: lobectomy.
Scan view of the previous case
Man, 48 years old, fever and purulent sputum. Heavy smoker and chronic alcoholism. No AFB in sputum and bronchial aspiration.
The picture looks like case N°22

- TB cavity is possible, but AFB negative with such a cavity is not indicative of this diagnosis. The lack of other lesions (nodules) is also an argument against this diagnosis.
- Cavited cancer is a possible diagnosis, even if there is a acute infectious context.
- **Bacterial abscess** was the good diagnosis. Notice the sharpness of the internal limit and the blur of the external limit which is an argument for this diagnosis. (notice this sign makes the difference with the previous case)
Case N°23

CT scan of the previous diagnosis.
Evolution after antibiotic treatment by amoxi + ac clav., at 10 days and at 2 months: confirmation of the diagnosis of bacterial abscess
Young woman, with acute symptoms: fever, purulent sputum
AFB negative in sputum.
Chest X ray: round bulky excavated and isolated opacity in the left lung. **Bacterial, non TB abcess.** Notice the sharpness of internal limits and the blur of the external limits which is indicative of the diagnosis of abcess.
Man, good health context. No respiratory symptoms except regurgitation and sometimes dysphagia.
Case N°25

Chest x ray: retrocardiac round picture with fluid level: **Hiatal hernia**
Man, 66 years old, past history of smoking. Weight loss and hemoptoïc sputum. AFB negative.
Case N°26

Chest X ray: round mass with hilar adenopathies and beginning of excavation
TB is very improbable: No AFB in sputum with this excavated lesion (if it was TB, AFB should be numerous in sputum). No associated lesion like infiltrate on the chest X ray. Bacterial abscess is possible but rather improbable: no fever, no purulent sputum and the external edges are rather sharp for an abscess.

**Bronchial cancer with lymph node extension** is the most probable diagnosis
Scan view of the previous case: notice the sharp edges and the thickness of the wall: Typical aspect of excavated cancer (epidermoid type)
Man, 32 years old. Admission in the emergency unit for life threatening hemoptysis. Past history of TB treatment many years ago but no information about duration and type of treatment. Improvement with glypressine IV.
Case N°27

Chest X ray: fibrotic and retractile picture of the upper lobe with ascension of the minor fissura (red arrow). Possible bronchiectasis. Notice also ascension of the right diaphragm and right hilus:

**TB sequela.** AFB negative; no need of new TB treatment. But high risk of repetition of life threatening hemotisy: Lobectomie with surgical excision of the sequela area has to be discussed.
Scan view of the previous case: TB sequela with bronchiectasis is confirmed.
Woman, may 2003, acute dyspnea with severe hemoptysis. Several similar events in the past history.
Woman, may 2003, acute dyspnea with severe hemoptisy. Several similar events in the past history.

Chest X ray: round isolated macronodule in the right upper lobe. Notice thin circular clarity around the opacity.
Case N°28

May 2004, same patient, same event. HIV negative. Repeated AFB negative. Nevertheless TB treatment is instaured, with no improvement.
Aspergilloma…
Improvement after surgery.
17 years old boy, cough and worsening condition. HIV negative
Numerous AFB in sputum.
CXR: TB excavated pneumonia of the left upper lobe. Notice Tb contolateral infiltrate in the right upper lobe. The association of 2 lesions of different seniority, is very typical of TB
Man, 65 years old, past history of treated TB, recurrent severe hemoptysis
Case N°30

Important TB sequella with pleural thickness and possible aspergilloma in old cavity in the upper left lobe.
Chronic dyspnea, hemoptysis. Past history of lung disease. Cannot give more precision...
Case N°31

TB sequella with probable aspergilloma in the left lobe (red arrow)